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# Gabriel Costa De Oliveira

## Software Engineer

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Graduated in Software Engineering from one of the **top universities in the Latin America**, with over **three years of professional experience** as a data scientist and backend developer. Furthermore, I have been awarded in several competitive programming contests, which demonstrates my **strong analytical skills to solve complex problems**.

## EDUCATION

**Bachelor's in Software Engineering,**  
*University of Brasília (UnB)*

2019 — 2025

The University of Brasília (UnB) stands out in the 2025 CWUR ranking, placing among the top **2% in Latin America and the top 4% worldwide**. *See more.*

## RECENT WORK EXPERIENCE

**AI.lab UnB**

**January 2024 — July 2025**  
*Brasília, DF*

Work on the high-impact Osiris Project, resulting from an **investment of \$700,000 USD**, developing AI applications to streamline workflows for **judges and prosecutors** in tax enforcement. Held dual roles as Data Scientist and Backend Developer.

**Backend Developer**  
*August 2024 — Present*

- Develop APIs and AI services to integrate machine learning models aimed at improving the work of judges and prosecutors in tax enforcement.
- Deploy models to production using **FastAPI**, **Docker** containers, and **MLOps** practices.
- Implement unit and integration tests using **Pytest**.
- Apply parallel and distributed programming techniques to reduce processing time.
- Create new modules following a **microservices** architecture.

**Data Scientist**  
*January 2024 — August 2024*

- Used **MLflow** for versioning and developing **pipelines for AI** models.
- Utilized MLflow for model **performance analysis** and testing different hypotheses.
- Implemented efficient pipelines for preprocessing (data mining, cleaning, and augmentation), vectorization, and storage of textual data.
- Leveraged LLMs such as **Llama 3**, along with **RAG** techniques and **NLP** for legal text classification.
- Successfully trained and integrated AI models for legal document **classification**.
- Applied **Machine Learning** (scikit-learn) and **Deep Learning** (PyTorch, TensorFlow).

**Zeroo**

*Android Developer*

**September 2022 — November 2023**

*Brasília, DF*

- Developed native Android app using Java/Kotlin
- Integrated **AI models** for object classification with **TensorFlow** and **ML Kit**
- Created requirements documentation using Mkdocs
- Implemented MVVM architecture with SOLID principles and **GOF patterns**

- Built relational database using **SQLite3** with Room and LiveData

## University of Brasília

*Data structures & Algorithms teaching assistant*

**March 2022 — August 2022**

*Brasília, DF*

Enhanced expertise in algorithms while developing technical communication skills:

- Greedy algorithms
- Dynamic Programming
- Tree structures
- Graph theory
- Complexity analysis (Big-O)

## SKILLS

<b>Languages</b>	C, C++, Java, Python, SQL
<b>Tools</b>	Git, Linux, Sklearn, NLTK, TensorFlow, Hadoop, Pytorch, PySpark, mariaDB, MongoDB, MySql, SQLite3, FastAPI, SQLAlchemy, Numpy, SymPy, Pandas, matplotlib & pytest
<b>DevOps &amp; QA</b>	CI/CD Pipelines, SonarQube, Unit Testing, Integration Testing, Docker & Kubernetes
<b>Software Engineering</b>	Design Patterns, SOLID Principles, Clean Code, Relational Database Modeling, Messaging Systems, Parallel & Distributed Programming & Microservices
<b>Methodologies</b>	Agile (Scrum, Kanban, XP) & TDD (Test-Driven Development)
<b>Communication</b>	Portuguese (Native) & English (C1)

## CERTIFICATIONS, AWARDS, AND HONORS

I possess not only **advanced knowledge in data structures and algorithms** but also a strong analytical ability to solve complex problems. These skills led me to the **ICPC Brazilian Programming Finals** in 2023 and a top placement in IEEEExtreme 17.0. Additionally, these competitions were instrumental in solidifying my **Python and C++** expertise.

<b>ICPC South America Brazil Finals</b> — <i>Honorable Mention</i>	2023
<b>ICPC South America-Brazil First Phase</b> — Qualified for the Brazilian Finals, 66th Place	2023
<b>IEEEExtreme 17.0</b> — 4th Best Brazilian Team, ranking among the top 14% globally	2023